REMARKS

The Applicants have instantly cancelled claim 9 and amended claims 1-8, 10, 12 and 14. Specifically, the subject-matter of each of claims 1-8 and 14 has been changed from "a photosensitive resin composition" to --a laser engravable printing element which is a photocured resin composition-- and claim 9 has been cancelled. Support for this amendment is found throughout the present specification, for example at page 69, line 16 to page 70, line 11 of the present specification. Further, the "inorganic porous material" has been changed to --inorganic porous particles--. Support for this amendment is found at page 44, lines 10 to 12 of the present specification.

In claim 12, "a photosensitive resin composition layer" has been changed to --a photocurable resin composition layer--, and the resin composition used for forming the photocurable resin composition layer has been defined as a resin composition comprising the specific components (a), (b) and (c). Support for this amendment is found throughout the present specification, for example at page 69, line 16 to page 70, line 11 of the present specification.

From the above, it is apparent that instant proposed amendment does not raise any new matter or any new issue problem.

/II/ Before specifically addressing the Examiner's rejection of the claims, it is believed that the following background information should be considered in order to shed a proper light on the development of the present invention and the advantageous features thereof. As clearly defined in instantly amended claim 1 of the present application, the laser engravable printing element of the present invention is a photocured resin composition comprising:

(a) a resin which is in a solid state at 20 °C and having a number average molecular weight of from 5,000 to 300,000;

(b) an organic compound having a number average molecular weight of less than 5,000 and having at least one polymerizable unsaturated group per molecule, and

(c) <u>inorganic porous particles</u> having an average pore diameter of from 1 nm to 1,000 nm, a pore volume of from 0.1 ml/g to 10 ml/g and a number average particle diameter of not more than 10m (see instantly amended claim 1).

As apparent from the above, component (C) is inorganic porous particles, namely plurality of particles made of an inorganic material, wherein each particle has plurality of pores (or holes or voids). In the present invention, it is essential that the porous particles used as component (c) simultaneously have a specific average pore diameter, a specific pore volume and a specific number average particle diameter.

The average pore diameter and the pore volume of porous particles are properties which reflect the structure of the pores of the particles, and the size of the particle has no influence on the pore diameter and the pore volume. Specifically, the average pore diameter represents the size of the pores, that is, the average diameter of the holes present in the particles. The pore volume represents the amount of the pores contained in the particles, that is, the cumulative amount of empty space in the holes present in the particles. Both the average pore diameter and the pore volume are measured by the nitrogen adsorption method (see page 47, lines 5-6 and 15-17 of the present specification).

On the other hand, the number average particle diameter reflects the size of the particles. Specifically, the number average particle diameter is the average size of the particles used, and it is a value determined by a laser scattering particle size distribution analyzer (see page 48, lines 12-14 of the present specification). The size and amount of the pores present in the particles has no influence on the particle diameter. In other words, whether a particle is porous or not has nothing to do with the size of the particles.

For demonstrating that a number average particle diameter, an average pore diameter and a pore volume of inorganic particles are independent properties without any correlation among them, Applicants instantly submit Exhibit 1 in the form of Mr. Yamada Declaration. An unexecuted declaration is being filed herewith. The executed declaration will follow. The declaration has three parts (1) the declaration itself (2) Exhibit 1 and (3) Exhibit 2.

Mr. Yamada has made observations on the properties of various inorganic particles to demonstrate that a number average particle diameter, an average pore diameter and a pore volume of inorganic particles are independent properties without any correlation among them and that the pore diameter and pore volume of particles cannot be contemplated from the number average particle diameter of the particles.

From Exhibit 1 of the accompanying Yamada Declaration, it has been clearly substantiated:

that a number average particle diameter, an average pore diameter and a pore volume are independent properties without any correlation among them;

that, with respect to inorganic porous particles, the average pore diameter and the pore volume are independent properties without any correlation therebetween;

that inorganic particles having a number average particle diameter of not more than 10m do not necessarily have an average pore diameter of from 1 nm to 1,000 nm and a pore volume of from 0.1 ml/g to 10 ml/g; and

that the average pore diameter and the pore volume of inorganic particles cannot be contemplated from the number average particle diameter thereof or vice versa.

As clearly demonstrated in Exhibit 1, both porous inorganic particles and non-porous inorganic particles are commercially available, and it is impossible to contemplate whether a particle is porous or not from the number average particle diameter of the particle.

The present invention is based on a novel finding that, when a printing element is formed by photocuring a resin composition containing specific inorganic porous particles having an average pore diameter of from 1 nm to 1,000 nm, a pore volume of from 0.1 ml/g to 10 ml/g and a number average particle diameter of not more than 10m, the formed printing element generates only a small amount of liquid debris during the laser engraving of the printing element. Further, the produced printing element is advantageous in that a precise image can be formed on the printing element by laser engraving, and in that the resultant image-bearing printing plate not only has small surface tack and excellent abrasion resistance, but also is capable of suppressing the adherence of paper dust and the like to the printing element and the occurrence of printing defects (see page 14, line 2 to page 15, line 11 of the present specification).

For demonstrating the criticality of using inorganic porous particles simultaneously having a specific average pore diameter, a specific pore volume and a specific particle diameter, Applicants instantly submit Exhibit 2 in the form of Mr. Yamada Declaration. Mr. Yamada has made observations on the criticality of using inorganic porous particles simultaneously having an average pore diameter of from 1 nm to 1,000 nm, a pore volume of from 0.1 ml/g to 10 ml/g and a number average particle diameter of not more than 10m for suppressing the generation of liquid debris during the laser engraving of a printing element and lowering the amount of surface tack, with reference to Example 1 and Comparative Examples 4 and 5 of the present specification.

From Exhibit 2 of the accompanying Yamada Declaration, it has been clearly substantiated:

that the use of inorganic porous particles which simultaneously have an average pore diameter of from 1 nm to 1,000 nm, a pore volume of from 0.1 ml/g to 10 ml/g and a number average particle diameter of not more than 10m is critical for suppressing the generation of liquid debris during the laser engraving of a printing plate and lowering the amount of surface tack.

Contrary to the above, as explained in detail below, each of the references cited by the Examiner has no teaching or suggestion about the use of inorganic porous particles which simultaneously have an average pore diameter of from 1 nm to 1,000 nm, a pore volume of from 0.1 ml/g to 10 ml/g and a number average particle diameter of not more than 10m for forming a printing element which not only generates a small amount of liquid debris, but also enables a formation of a precise image by laser engraving.

/III/ Turning now to the Examiner's specific reasons for the rejection of the claims in the Office Action, we wish to argue as follows.

Item 6 of the Office Action:

Claims 1-5 and 8 each directed to a photosensitive resin composition are rejected under 35 U.S.C. 103(a) as being unpatentable over Takemiya et al., U.S. Patent No. 6,372,351 B1 in view of Mori et al., U.S. Patent No. 6,399,270 B1.

Traverse is made as follows.

For more clearly defining the present invention, the Applicants have amended claims 1-5 and 8 by changing the subject-matter of these claims from "photosensitive resin composition" to --laser engravable printing element--.

Applicants believe that the Examiner's reasons for rejection are no longer applicable to amended claims 1-5 and 8.

Item 7 of the Office Action:

Claims 9-11 each directed to a printing element are rejected under 35 U.S.C. 103(a) as being unpatentable over Takemiya et al., U.S. Patent No. 6,372,351 B1 in view of Mori et al., U.S. Patent No. 6,399,270 B1 as applied to claim 1 above and further in view of Cushner et al., U.S. Patent No. 5,798,202. Specifically, the Examiner states as follows.

> "Takemiya teaches a resin composition comprising an epoxy resin, a non-conductive carbon and an inorganic filler (col. 2, lines 44-47). The resin composition is photosensitive because the

composition is exposed to laser light (see column 14, lines 65-67). Takemiya does not teach a laser engravable printing element.

However, Cushner teaches a laser engravable printing plate. Although Cushner teaches that the printing plate has a single layer, the single layer is produced by a building up of multiple layers of the same composition (col. 2, lines 54-59).

.....

In column 5, lines 30-55, Cushner teaches photochemical reinforcement of the elastomer layer by using photohardening materials in the elastomer layer and exposing it with actinic radiation. Claim 9 is a product by process claim.

.....

<u>It would have been obvious to one of ordinary skill in the art to use the photosensitive resin material of Takemiya in the laser engraveable printing element of Cushner</u> because Cushner teaches photosensitive material in the elastomeric layer of the printing element to absorb the laser radiation." (emphasis added)

Traverse is made as follows.

As explained in item /I/ above, the subject-matter of each of claims 1-8 and 14 has been changed from "photosensitive resin composition" to --laser engravable printing element--, and claim 9 has been cancelled. In accordance with the instant amendment to the claims, patentability of amended claims 1-8, 10, 11 and 14 each directed to a printing element will be explained below.

In the outstanding Office Action, the Examiner misunderstands that Takemiya et al. disclose a resin composition comprising inorganic porous particles (c) used in the present invention. As explained in detail below, Takemiya et al. has no teaching or suggestion about the specific inorganic porous particles used in the present invention.

As the Examiner states in the outstanding Office Action, Takemiya et al. describes the use of inorganic particles as a filler and describes a non-conductive carbon material having an average particle diameter of 0.3 to 5 μm (col. 8, line 59), surface area of 130 m^2/g or smaller, and a DBP oil absorption of 120 $cm^3/100$ g (120 ml/100 g) or less (col. 10, lines 34-40). In this connection, in item 6 of the outstanding Office Action, the Examiner states as follows.

"Since the non-conductive carbon material has an average particle diameter of 0.3 to 5 μm, it also would have a pore volume of 0.1 ml/g to 10 ml/g." (see page 3, lines 9-11 of the Office Action)

The Examiner provides no explanation as to why a non-conductive carbon material having an average particle diameter of 0.3 to 5 μm would have a pore volume of 0.1 ml/g to 10 ml/g. Therefore, the Examiner's statement above is only an assertion without any support.

As explained in detail in item /II/ above with reference to Exhibit 1 of the accompanying Yamada Declaration, both porous inorganic particles and non-porous inorganic particles are commercially available, and it is impossible to contemplate whether a particle is porous or not from the number average particle diameter of the particle. Specifically, it is impossible for even a skilled person to estimate the pore volume of an inorganic particle from the average particle diameter thereof. Accordingly, Takemiya et al. having no description about the pore volume and the pore diameter of the particles used have no teaching or suggestion about the specific inorganic porous particles simultaneously having an average pore diameter of from 1 nm to 1,000 nm, a pore volume of from 0.1 ml/g to 10 ml/g and a number average particle diameter of not more than 10 μm.

Further, in Takemiya et al., the inorganic particles are used only as a filler. Therefore, Takemiya et al. has no teaching or suggestion about the criticality of using the above-mentioned specific inorganic porous particles for suppressing the generation of liquid debris during the laser engraving of a printing plate and lowering the amount of surface tack.

In addition, as clearly defined in instantly amended claim 1 of the present application, the laser engravable printing element of the present invention is a photocured resin composition which is obtained by shaping the specific resin composition into a sheet or cylinder, and irradiating the shaped resin composition with a light or an electron beam to thereby photocure the resin composition. On the other hand, Takemiya et al. disclose only a heat curable resin composition. Therefore, Takemiya et al. has no teaching of suggestion about the resin composition used for forming the laser engravable printing element of the present invention.

Even when the resin composition of Takemiya et al. is used in combination with the organic compound disclosed in Mori et al., and a printing element is formed in accordance with the description of Cushner et al., the resultant printing element do not contain the specific inorganic porous particles defined in claim 1 of the present application. Therefore, the present invention is neither anticipated by nor obvious over Takemiya et al., Mori et al. and Cushner et al. taken alone or in combination which have no teaching or suggestion about the laser engravable printing element of the present invention which contain the specific inorganic porous particles critical for suppressing the generation of liquid debris during the laser engraving of a printing plate and lowering the amount of surface tack.

Item 8 of the Office Action:

Claims 1, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kannurpatti et al., EP 1215044 A2. Specifically, the Examiner states as follows.

> "Kannurpatti teaches a method for forming a laser engravable printing element. The printing element comprises an elastomeric layer. The elastomeric layer comprises monomers with a molecular weight of less than 30,000 (component a) (page 4, [0018]). The printing element may also comprise an addition-polymerization ethylenically unsaturated compound with a molecular weight of less than 5,000 (component B) (page 4, [0018]). Kannurpatti teach that the printing element comprises an elastomeric resin, such as Kraton 1102 (see page 7, table 1 and page 5, [0015]). The elastomeric layer also comprises an inorganic filler with a particle size of less than 1μm (component c) (page 5, [0022]). The inorganic porous material is preferably zirconium silicate and amorphous silica as exemplified in examples 1 and 2, respectively. Kannurpatti does not specifically teach that the elastomeric resin used is in a solid state at 20 °C, however it would have been obvious to one of ordinary skill in the art to use a solid elastomer to have a more flexible and durable elastomer for the laser engraving process. Kannurpatti does not specifically teach that zirconium silicate and amorphous silica have pore volume and pore diameter as claimed. However, <u>it would have been obvious to one of ordinary skill in the art that zirconium silicate and amorphous silica would have pore diameter and pore volume as claimed because these compounds are disclosed as suitable inorganic porous material for the photosensitive composition and would provide the solubility required for an effective elastomeric layer for the laser engravable element</u>. Kannurpatti also teaches that the method for forming the printing element comprises mounting the printing element onto a drum and exposed to laser light (page 7, [0034]). A relief depth is formed in the areas exposed to laser light. The printing element is exposed to UV radiation to effect photohardening. The composition also comprises a photopolymerization initiator to crosslink-cure the composition (see examples 1 and 2)." (emphasis added)

Traverse is made as follows.

As explained in item /I/ above, the subject-matter of claim 1 has been changed from "photosensitive resin composition" to --laser engravable printing element--. The Applicant believes that the rejection of claim 1 has been removed by the instant amendment to the claims. Therefore, only the patentability of amended claims 12 and 13 directed to a method for producing a laser engraved printing element will be explained below.

The Examiner seems to believe that Kannurpatti et al. disclose the method for producing the laser engravable printing element of the present invention. However, this belief is completely wrong. As explained in detail below, Kannurpatti et al. do not teach or suggest a method for producing a laser engravable printing element which comprises photocuring a shaped resin composition containing specific inorganic porous particles.

Kannurpatti et al. disclose a thermoplastic elastomer composition obtained by adding to a thermoplastic elastomer a bleachable compound (as a photopolymerization initiator) and an additive having a functional group (e.g., a Si-O group) which absorbs infrared radiation. In the invention of Kannurpatti et al., the generation of liquid debris is suppressed by the use of a bleachable photopolymerization initiator which allow UV radiation to penetrate deeper into the resin composition layer and allow the resin composition layer to cure more rapidly and completely (see paragraph [0019] of Kannurpatti et al.). Further, an additive having a functional group which absorbs infrared radiation is used to improve the engraving sensitivity of the resin composition layer and reduce the tackiness of the engraving debris (see paragraph [0022] of Kannurpatti et al.). For example, when the printing plate produce in Example 3A of Kannurpatti et al. is subjected to laser engraving, the engraving debris was in a <u>powder</u> form (see paragraph [0049] of Kannurpatti et al.).

In the outstanding Office Action, the Examiner asserts that "zirconium silicate and amorphous silica would have pore diameter and pore volume as claimed because these compounds are disclosed as suitable inorganic porous material for the photosensitive composition and would provide the solubility required for an effective elastomeric layer for the laser engravable element". This assertion is completely wrong. In Kannurpatti et al., inorganic particles are used as an additive which absorbs infrared radiation and the particle size of such additive is up to few micrometers, preferably less than 1 micrometer (see paragraph [0022]). Although the particle size of the additive is described in Kannurpatti et al., there is <u>no</u> description about the pore diameter and the pore volume of the inorganic particles used. As explained in detail in item /II/ above with reference to Exhibit 1 of the accompanying Yamada Declaration, the pore diameter and the pore volume of porous particles cannot be contemplated from the particle diameter. Therefore, Kannurpatti et al. only have a <u>generic</u> disclosure of the inorganic particles used as an additive, and there is <u>no</u> teaching or suggestion about the photocurable resin composition used in the present invention which contains inorganic <u>porous</u> particles having <u>specific pore volume, specific pore diameter and specific particle diameter</u>.

Moreover, as explained in detail in item /II/ above with reference to Exhibit 2 of the accompanying Yamada Declaration, in the present invention, the use of the inorganic porous particles having specific pore volume, specific pore diameter and specific particle diameter defined in instantly amended claim 12 of the present application is critical for suppressing the generation of engraving debris generated during the laser engraving of the printing element. In other words, the pore volume, pore diameter and particle diameter are not defined for providing the solubility required for an effective elastomeric layer. Accordingly, Kannurpatti et al. have no disclosure of inorganic porous particles defined in instantly amended claim 12 of the present application.

The inorganic particles used in Kannurpatti et al. (namely zirconium silicate and amorphous silica (HiSil® 915)) are explained in more detail below.

Zirconium silicate is a crystalline inorganic compound having a high melting point. It is very difficult to produce porous microparticles of amorphous zirconium silicate by any of the conventional methods, while maintaining the composition of zirconium silicate (theoretical chemical composition of this compound $ZrSiO_4$: 64.0 % of ZrO_2 and 34.0 % of SiO_2). Therefore, microparticles of zirconium silicate are obtained by pulverizing a bulk of crystals, and it is presumed that the particles obtained in such a manner are not porous. Further, zirconium silicate, which is a mineral silicate of zirconium, is the main component of a mineral known as zircon, and that, in many cases, zirconium silicate is in the form of short prismatic crystals having chemical and physical properties which are greatly different from those of zirconium oxide. The present inventors analyzed a commercially available zirconium silicate (Product No. 261-00515 (catalogue issued in 2002); manufactured and sold by Wako Pure Chemical Industries, Ltd., Japan) and found that the pore volume of the zirconium silicate particles measured by the nitrogen adsorption method was as small as 0.026 ml/g. Thus, the commercially available zirconium silicate was not a porous material which can be used in the present invention. In addition, another commercially available zirconium silicate (Product No. 38328-7; manufactured and sold by Sigma-Aldrich Co., U.S.A.) was also analyzed in the above-mentioned manner, and it was confirmed that this zirconium silicate was also not porous. Accordingly, zirconium silicate used in the working examples of Kannurpatti et al. is a non-porous inorganic material (see page 11, line 11 to page 13, line 7 of the present specification).

Further, the present inventors analyzed the physical properties of HiSil® 915 by the methods described in the present specification. It was found that HiSil® 915 exhibits some

porosity, but has a particle diameter which is outside (above) the range recited in claim 12 of the present application.

Further, according to the working examples of Kannurpatti et al., the use of zirconium silicate (a non-porous material) is advantageous over the use of HiSil® 915 (a porous material). Specifically, Example 3A of Kannurpatti teaches that, when zirconium silicate is used as a filler, the debris left after laser engraving was easily cleaned (see paragraph [0049] of Kannurpatti et al.). On the other hand, Example 3C teaches that, when the zirconium silicate is replaced with HiSil® 915, the debris left after laser engraving was only moderately easy to clean (see paragraph [0052] of Kannurpatti et al.). Accordingly, the use of a non-porous material (zirconium silicate) was more effective than the use of a porous material (HiSil® 915) for improving the cleanability of the engraving debris.

As apparent from the above, Kannurpatti et al. have no teaching or suggestion about the method of the present invention which uses a photocurable resin composition containing specific inorganic porous particles (c) and the excellent effects of the specific inorganic porous particles (c) for the absorption removal of viscous liquid debris generated during laser engraving of the printing element.

Therefore, the method for producing the laser engravable printing element of the present invention is neither anticipated by nor obvious over Kannurpatti et al.

Item 9 of the Office Action:

Claims 1, 2, 5-7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takemiya et al., U.S. Patent No. 6,372,351 B1 in view of Mori (above) as applied to claim 1 above, in view of Watanabe et al., U.S. Patent Publication No. 2002/0045126 A1 and further in view of Mohri et al., U.S. Patent no. 5,851,649.

> Takemiya teaches an epoxy resin composition comprising an epoxy resin, a non-conductive carbon and an inorganic filler (col. 2, lines 44-47). Takemiya does not teach the sphericity of the silica particles or polyhedral particles as in instant claim 6.
>
> However, Watanabe teaches a photocurable composition comprising spherical silica particles. The spherical silica particles have a sphericity of 0.95 or more (page 5, [0056]). Watanabe also teaches a cationic polymerizable compound which is crosslinked and/or polymerized in the presence of a photoinitiator by irradiating with light as in instant claim 14 (photopolymerizable initiator) (page 2, [0020]). Therefore, it would have been obvious to one of ordinary skill in the art to use particles having a sphericity amount as claimed because Watanabe shows the sphericity amounts as

conventional in photosensitive resins.

However, Mohri teaches inorganic porous particles, such as polyhedral crystals with a pore size distribution of smallest (10 %) to largest (90 %) sphere in the polyhedral particle (D_{10}/D_{90}) is no more than 3 (abstract). According to figure 3 in the Mohri reference, the pore diameter of the particle is approximately 5-10 nm (0.005-0.010m). Therefore, it would have been obvious to one of ordinary skill in the art that the polyhedral particles having a D_{10}/D_{90} ratio of 3 would be expected to have a D_3/D_4 ratio of 1 to 3 because the values are based on pore volume distribution and diameter.

Traverse is made as follows.

For more clearly defining the present invention, the Applicants have amended claims 1-8 and 14 by changing the subject-matter of these claims from "photosensitive resin composition" to --laser engravable printing element--.

Applicants believe that the Examiner's reasons for rejection are no longer applicable to amended claims 1, 2, 5-7 and 14. However, for facilitating the Examiner's understanding of the present invention, patentability of the instantly amended claim 1 directed to laser engravable printing element is explained below.

As explained in connection with item 7 of the Office Action, Takemiya et al. have no teaching or suggestion about inorganic porous particles having <u>a specific average pore diameter, a specific pore volume and a specific number average particle diameter</u> and the criticality of using such inorganic porous particles for suppressing the generation of liquid debris during the laser engraving of a printing element and lowering the amount of surface tack. Further, Takemiya et al. have no teaching or suggestion about a laser engravable printing element which is a <u>photocured</u> resin composition.

With respect to Watanabe et al., the Examiner misunderstands that Watanabe et al. teach a photocurable resin composition comprising inorganic porous particles having a specific pore volume, a specific pore diameter and a specific particle diameter. In this connection, in the outstanding Office Action, the Examiner state as follows.

> "Watanabe also teaches spherical silica particles with a sphericity of 0.95 or more and an average particle diameter of 1-50 μm (page 5, [0056]). The average particle diameter meets that limitations of the inorganic porous material with an average particle diameter of not more than 10 μm as in instant claim 1. Although the terms "particle" and "pore" may not be the same, Watanabe teaches the

> sphericity and average particle size of an inorganic porous material. The sphericity of a material is related to the pore volume of the material. Therefore, one of ordinary skill in the art would contemplate that the inorganic particles would have a pore volume of 0.1 to 10 ml/g as in instant claim 1." (emphasis added) (see item 16, p.11-12 of the Office Action)

The Examiner provides no explanation as to why a sphericity of a material is related to the pore volume and why a skilled person would contemplate that silica particles with a sphericity of 0.95 or more and an average particle diameter of 1-50 μm have a pore volume of 0.1 to 10 ml/g. Therefore, the Examiner's statement above is only an assertion without any support.

As described at page 58, lines 5-10 of the present specification, the "sphericity" of a particle is defined as a ratio D_1/D_2, wherein D_1 represents the diameter of a largest circle which is enclosed within a projected image of the spherical particle and D_2 represents the diameter of a smallest circle which encloses the projected image of the spherical particle therein. In other words, sphericity is an index for the shape of the particle and it is independent from the pore volume of the porous particles.

In addition, the Examiner misunderstands that an inorganic sintered body described in Mohri et al is inorganic porous particles and that Figure 3 of Mohri et al. shows a relationship between the pore volume and the pore diameter which can be used to correlate the pore volume distribution to the pore diameter of porous particles in general.

Firstly, the alumina porous sintered body of Mohri et al. is an assembly inorganic particles obtained by molding the inorganic particles or packing the inorganic particles into a container, followed by calcination. The pores of the sintered body are void space formed between the inorganic particles and there is no description about the pores of the inorganic particles used. Secondly, the relationship shown in Figure 3 of Mohri et al. is specific for the sintered body of Mohri et al. The Examiner provides no reasoning as to why this relationship is applicable to inorganic porous particles used in other references.

As explained in detail in item /II/ above with reference to Exhibit 1 of the accompanying Yamada Declaration, both porous inorganic particles and non-porous inorganic particles are commercially available, and it is impossible to contemplate whether a particle is porous or not from the number average particle diameter of the particle. Further, a number average particle diameter, an average pore diameter and a pore volume are independent properties without any correlation among them and there is no generalized formula representing the relationship

between the average pore diameter and the pore volume of all porous products on market. Therefore, it is impossible for even a skilled person to estimate the pore volume of an inorganic particles from the average particle diameter of the particles or vice versa.

Even when the resin composition of Takemiya et al. is used in combination with the organic compound disclosed in Mori et al. and the inorganic material described in Watanabe et al. or Mohri et al., the resultant printing element do not contain the specific inorganic porous particles defined in the present invention. Therefore, the present invention is neither anticipated by nor obvious over Takemiya et al., Mori et al. and Watanabe et al. or Mohri et al. taken alone or in combination which have no teaching or suggestion about the laser engravable printing element of the present invention which contain the specific inorganic porous particles critical for suppressing the generation of liquid debris during the laser engraving of a printing plate and lowering the amount of surface tack.

From the forgoing, it is believed that the Examiner's rejections have been overcome, and the present application is now in condition for allowance.

Reconsideration and early favorable action on the claims are earnestly solicited.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: Oct 15 2007

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